	CLASSIFICATION  CENTRAL INTELLIGENCE AGENCY  INFORMATION REPORT	25X1A  REPORT NO  CD NO 25X1
COUNTRY	East Germany Analyses of Zeitz Chemical Products	DATE DISTR. 15 April 1953 NO. OF PAGES 4
	25X1A	NO. OF ENCLS. GUSTED BELOW: SUPPLEMENT TO REPORT NO.

## THIS IS UNEVALUATED INFORMATION

## 25X1X

The following list gives the elemental analyses (Elementaranalysen) of chemical products manufactured by Zeitz:

-			
Characteristics	Guaranteed Value	Testing Wethod	
Sulphur	Yellow	extraction with sodium	
Color		sulfide and oxidation of	
Sulphur content	99.9 %	the sulphur in solution to sulphate.	
Ash content	0.02 - 0.05 %	Burning in a crucible in a retort furnace	
Insoluble sodium sulphide	0.05 - 0.08 %	Dissolving of sulphur in sodium sulphide and determination of the insoluble part by filtration and weighing	
noisture content	0.0 = 0.2 %	Drying oven method at 70°C	
Iron content	traces	from ashes: the iron is	
		extracted with hydrochloric	
	f	acid and tested relarimetri- cally as iron iodanide (Risenhodanid) Fresenius and beck method:	<b></b>
Amount of bituminous substance	0.01 \$	evaporation of the sulphur in a crucible on a sand bath at 200°C, with examination of the ash content	
Diesel fuel			
appearance	Light to dark, free of impurities		
Specific weight at 20°C	0.800 - 0.900	Areometer	
Boiling point	160°C = 260°C	Ingler boiling analysis	
Conversion up to 300°C	Not less than 60 %	ingler boiling analysis	
teter content	Not more than 0.50 %	Xylol method	1

CLASSIFICATION SECRET DISTRIBUTION X NSRB

X AIR 25X1A

25X1

Characteristics	Guaranteed Value	Testing Method
Ash content	At the most 0.05 \$	Burning in an incineration retort.
Hard asphalt content Flash point	0 % At the least 55°C At the most 145°C	Test with normal gasoline Pensky-Martens test in a closed crucible
Conradson test Neutralisation number	Maximum of 0.2 % Not over 0.2 mgKOH/g	Conradson appearatus Titration with alcohol-KOH solution
Cetane rating Zine strip test	Minimum of 40 Maximum of 4	Test diesel Immersion of a zinc strip for one hour at 50°C and 100°C
Beginning of paraffin separation Solidifying point	Not over - 5°C in winter	
Sumer Winter	0°C -10°C	
White Paraffin Specific weight at 70°C	0.775 - 0.779 White crystalline mass	Areameter
Appearance Od <b>or</b>	None	
Stability of color Boiling characteristics	No desoloration 370°C ~ 480°C	Seven days exposure to light Vacuum distillation at 10 mm. Mercury
Water-soluble acids and lyes	None	After extraction with water titration with n/10 caustic soda solution and n/10 sulphuric acid
Pollution	None	Extraction with benzene
Melting point Oil content	54°C - 58°C Below 1.0 %	Shukoff method and thermometer Acetone method at - 20°C
Sulphur content	Below 0.1 %	Burning in an oxyhydrogen apparatus or Grote-Krekeler apparatus
TTH Paraffin	0.000	
Specific weight at 70°C Boiling characteristics (converted to normal pressure)	0.775 - 0.782 360°C - 460°C	Areometer Vacuum distillation at 10 mm. Mercury
Helting point	50°C - 54°C	Rotary thermometer
Oil content	5 - 7 %	Acetone method at -20°C
Paraffin content Flash point	93 - 95 % 205°C - 210°C	Acetone method in open crucible
Molecular weight	380 - 400	Lowering freezing point according to Beckmann (Naphthalene)
Sulphur content	Maximum of 0.1 %	Oxyhydrogen incineration apparatus or Grote-Krekeler apparatus
Machine oil	0.000 0.005	tunanat an
Specific weight at 20°C Viscosity at 50°C	0.900 - 0.915 6.0 - 7.0°E	Areometer Vogel-Ossag apparatus, based on E 1/
Solidifying point	-4°C12°C	Decreasing temperature by stages in a cold bath
Flash point	210°C - 225°C	Marcusson method, in an open crucible
Neutralization number	0.0 - 0.1 mg.KOH/g.	Titration with n/10 alcohol- caustic soda solution
Saponification number	0.0 - 0.15 mg.KOH/g.	After saponification titration with n/10 hydrochleric acid
Water content Ash content	0.004 = 0.006 \$	Xylol standard method Incineration in a retort at 800°C
Hard asphalt content	0.5	Normal gasoline
Fatty oil content Viscosity polar altitude (Polhoche)	none 2.1 - 2.5	Saponification number Calculated according to Ubbelonde

Convariance test co. 0.3 - 0.2 \$ Convariance apparatus based converted to normal pressure)  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Spindle oil specific weight at 20°C 2.0 - 3.0°E 7 Vaccum distillation at 10 mm. Hercury  Water content 6 Prec of water 7 Vaccum distillation with n/10 alcoholocaustic sods solution 7 Vaccum distillation at 10 mm. Hercury  Hard asphalt content 8 None 9			
Nace apparatus  Noace apparatus  Noace apparatus  Noace apparatus  Ago°C - 520°C  Boiling characteristics (converted to normal pressure)  Specific weight at 20°C Viscosity at 50°C  Solidifying point  Flash point  Neutralization number  Neutralization number  Witer content  Boiling characteristics (converted to normal pressure)  Crude Phenol oil Specific weight at 20°C Water content  Carbolic acid Cresols Xylenols About 10 - 20 % About 40 - 50 % Xylenols Alcount 40 - 55 % About 40 - 50 % Xylenols Alcount 40 - 55 % About 40 - 50 % Xylenols Alcount 40 - 55 % About 40 - 5	Characteristics	Guaranteed Value	Testing Method
Boiling characteristics (converted to normal pressure)  Spindle oil Specific weight at 20°C Viscosity at 50°C Viscosity at 50°C Solidifying point Flash point Neutralization number Neutralization number Neutralization number Neutralization number None Hard asphalt content Fatty oil content Rolling characteristics (converted to normal pressure)  Grude Phenol oil Specific weight at 20°C Nater content Neutral oil content About 0.5 % Nater content Neutral oil content Neutral oil content Neutral oil content About 20 - 25 % Nelecents with higher boiling points, residue  Gasoline Appearance Specific weight at 15°C Boiling points, residue  Gasoline Neutral oil content About 0.5 % Nelecents with higher boiling characteristics Conversion up to 200°C Vapor pressure according to About 20 - 25 % Number Neutralization number At the most 0.0 & atmospheres  Neutralization number Neutralization number At the most 0.3 mg. KOH/z.  At the most 0.0 atmospheres  Neutralization number Ontane rating  Find. 200 At least 20 % by volume)  Vapor pressure according to About 20 - 20 mg./100 cm  Neutralization number Ontane rating  Find. 200 At least 20 % by volume)  Vapor pressure according to About 20 - 30 mg. KOH/z.  Neutralization number Ontane rating  Find. 200 At least 0.7 atmospheres at 0°C At condition At least 0.7 atmospheres at 40°C At least 1.5 atmospheres at 40°C Atmost 1.5 atmospheres at 40°C Atmost 1.5 atmospheres at 40°C Atmost 1.	Evaporation according to		
Specific weight at 20°C 2.0 - 3.0°E vogel-Ossag apparatus based on °E  Solidifying point -4°C12°C because in a cold bath between the point lass of c - 200°C becausing temperature by stages in a cold bath because in a cold bath bath in a co	Boiling characteristics (converted to normal	430°C - 520°C	
Specific weight at 20°C 2.0 - 3.0°E vogel-Ossag apparatus based on °E  Solidifying point -4°C12°C because in a cold bath between the point lass of c - 200°C becausing temperature by stages in a cold bath because in a cold bath bath in a co	Spindle oil		
Flash point  Neutralization number  Neutralization number  Water content Ash content Ash content Ash content Free of water Boiling characteristics (converted to normal pressure)  Crude Phenol cil Specific weight at 20°C Water content Neutral cil content Carbolic acid Cresols Xylenols About 16 - 20 x About 40 - 50 x A	Specific weight at 20°C		Vogel-Ossag apparatus based
Neutralization number   185°C - 200°C   Marcusson method, in an open crucible   Titration with m/10 alcohol-cautic soda solution   Xylol standard method   Indiperation in a retort at 800°C   More   Specific weight at 20°C   Meter content   Mone   Specific weight at 20°C   Meter content   Mout 0.5 %   Carbolic acid   About 0.5 %   About 4.0 - 50 %   Ab	Solidifying point	-4°C12°C	Decreasing temperature by
Neutralization number   No.   O.   O.   O.   O.   O.   O.   O.	Flash point	182°C = 200°C	Marcusson method, in an
Hard asphalt content Fatty oil content Boiling characteristics (converted to normal pressure)  Crude Phenol oil Specific weight at 20°C Mater content Note Carbolic acid Cresols Xylenols About 40 - 50 x	Neutralization number	0.0 = 0.15 mg.NOH/g.	Titration with n/10 alcohol-
Fatty oil content Boiling characteristies (converted to normal pressure)  Crude Phenol oil Specific weight at 20°C Water content Neutral oil content  Carbolic acid Cresols Xylenols Elements with higher boiling points, residue  Casoline Appearance  Conversion up to 100°C Conversion up to 200°C Vapor pressure according to Reid Sugmer  Neutralization number  Neutralization number  At the most 0.8 atmospheres  At the most 0.3 mg. KOH/g.  Titration with n/10 alcohol- KOH most n/10 at 100°C At the most 0.3 mg. KOH/g.  Titration with n/10 alcohol- KOH most n/10 at 100°C At the most 0.3 mg. KOH/g.  Titration with n/10 alcohol- KOH most n/10 al			Incineration in a retort at
Fatty oil content  Bolling characteristics (converted to normal pressure)  Crude Phenol oil Specific weight at 20°C Water content Neutral oil content  Carbolic acid Cresols About 16 - 20 %   Practionated distillation in alkaline solution Cresols Xylenols Elements with higher boiling points, residue  Gasoline Appearance  Gasoling Appearance  Conversion up to 100°C  Conversion up to 200°C  Vapor pressure according to Reid Sugmer  Neutralization number  Copper strip test  Neutralization number  Copper strip test  Neutralization Winter  At least 0.3 % mg. KOH/g.  Final gas Vapor pressure according to Reid Sugmer  Neutralization number  At the most 0.3 mg. KOH/g.  Final gas Vapor pressure according to Reid Sugmer  At least 0.7 atmospheres at 40°C appearatus Winter  At least 1.5 occording to Reid Sugmer  At least 0.7 atmospheres at 40°C appearatus Winter  At least 1.5 atmospheres at 40°C appearatus At least 1.5 atmospheres at 4.5°C appearatus	Hard asphalt content	None	Normal gasoline
Botling characteristics (converted to normal pressure)  Crude Phenol cil Specific weight at 20°C Water content  Carbolic acid Cresols Xylenols Elements with higher boiling points, residue  Casoling characteristics Conversion up to 200°C Vapor pressure according to Raid Support to the most 0.6 atmospheres  Neutralization number  Copper strip test  Silena characteristics Copper strip test  Neutralization number  Copper strip test  Neutralization  At least 0.7 atmospheres at 40°C At least 1.5 atmospheres at 40°C At least 0.7 atmospheres at 40°C Apparatus  Neutralization About 40 - 50 % ) Aneometer Apple standard method Circulatory distillation in alkaline solution About 40 - 50 % ) Areometer Apple standard method Circulatory distillation in alkaline solution About 40 - 50 % ) Areometer Apple standard method Circulatory distillation in alkaline solution About 40 - 50 % ) Areometer Apple standard method Circulatory distillation About 40 - 50 % ) Areometer Apple standard method Circulatory distillation Apple standard method Circu		None	Saponification number
Specific weight at 20°C Water content Neutral oil content Neutral oil content Nout 16 - 20 %   Fractionated distillation in alkaline solution Carbolic acid Cresols	Boiling characteristics (converted to normal	350°C = 430°C	
Water content Neutral oil content Neutral oil content About 0.5 % Carbolic acid Cresols About 16 - 20 % ) About 16 - 20 % ) About 40 - 50 % ) Areaseter  Below 60°C Below 60°C Below 60°C At the most 0.6 atmospheres  Bomb apparatus  Bomb apparatus  At the most 0.8 atmospheres  Bomb apparatus  Bomb apparatus  At the most 0.8 atmospheres  Bomb apparatus  Bomb apparatus  At the most 0.8 atmospheres  Bomb apparatus  Bomb apparatus  Bomb apparatus  Bomb apparatus  At the most 0.8 atmospheres  Bomb apparatus  Bomb apparatus  At the most 0.8 atmospheres  At least 0.7 atmosph	Crude Phenol oil		
Neutral cil content	Specific weight at 20°C		Areometer
Carbolic acid Cresols About 16 - 20 % ) Fractionated distillation in a "Kupferblase" according Kylenols Kelements with higher boiling points, residue  Gasoline  Appearance  Appearance  Water clear fres of impurities Below 0.800 Below 60°C Boiling point Boiling characteristics Conversion up to 100°C Conversion up to 200°C Vapor pressure according to Reid Summer  Winter  At the most 0.6 atmospheres  up to 40°C At the most 20 mg./100 cm  At the most 20 mg./100 cm  Neutralisation number Copper strip test  Negative  Negative  Negative  At least 0.7 atmospheres at 0°C Motor method  Fractionated distillation Fractionated distillation in a "Kupferblase" according to the formation method (Verbandsmethode)  Verbandsmethode)  Areometer Below 60°C Below 60°C  Below 60°C  At the most 0.6 atmospheres) Bomb apparatus  Proper strip test  Negative  Negative  Negative  Negative  Fractionated distillation in a "Kupferblase" according to the formation method (Verbandsmethode)  Verbandsmethode)  Verbandsmethode)  Areometer  Below 60°C  Bragler boiling analysis  At the most 0.8 atmospheres  Bomb apparatus  Evaporation residue from 100 cm² of fuel at 110°C in a glass bowl (Glasschal- KOH solution  Solution  Immersion of a copper strip In 50 cms. of gasoline for one hour at 50°C and 100°C  Motor method  Fuel gas  Vapor pressure according to Reid Summer  At least 0.7 atmospheres at 0°C At most 16.7 atmospheres at 40°C At	Water content		
Cresols Xylenols Xylenols Elements with higher boiling points, residue  Gasoline Appearance  Appearance  Appearance  Appearance  Water clear frelof Boiling point Boiling characteristics Conversion up to 100°C Conversion up to 200°C Vapor pressure according to Reid  Summer  At the most 0.6 atmospheres  Winter  Winter  At the most 0.3 % atmospheres  Burning in an "Kupferblase" according to the formation method (Verbandsmethode)  Areometer Below 6.0°C  Engler boiling analysis  At the most 0.6 atmospheres  Bomb apparatus  Bomb apparatus  Bomb apparatus  Evaporation residue (Abdampfrest)  At the most 0.3 % atmospheres  Burning in an "Kupferblase" according to the formation method  Areometer  Below 6.0°C  Engler boiling analysis  At the most 0.6 atmospheres  Bomb apparatus  Bomb apparatus  Evaporation residue from 100 cm² of fuel at 110°C in a glass bowl (Glasschal- Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  Fuel gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 40°C  At most 16.7 atmospheres at -15°C  At most 16.7 atmospheres at -15°C  At most 15.3 atmospheres at -15°C  At most 15.3 atmospheres at -15°C  Apparatus	Neutral oil content	About 0.5 %	
Cresols Xylenols Elements with higher boiling points, residue  Gasoline  Appearance  Appearance  Appearance  Appearance  Water clear frwl of impurities  Specific weight at 15°C Boiling point Boiling characteristics Conversion up to 100°C Conversion up to 200°C  Vapor pressure according to Reid  Summer  At the most 0.6 atmospheres  Winter  At the most 0.8 atmospheres  up to 40°C  At the most 20 mg./100 cm  Evaporation residue (Abdampfrest)  At the most 0.3 % Brancaturing in 50 ccm. of gasoline for one hour at 50°C and 100°C  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol-KOH solution  Copper strip test  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at 40°C At most 16.7 atmospheres at 40°C At most 16.7 atmospheres at -15°C Apparatus  At least 1.5 atmospheres at -15°C Apparatus  Apparatus  Apparatus  Apparatus  Apparatus  Apparatus  At least 1.7 atmospheres at -15°C Apparatus  Apparatus  At least 1.5 atmospheres at -15°C Apparatus	Carbolic acid	About 16 - 20 % )	Fractionated distillation
About 20 - 25 % ) to the formation method (Verbandsmethode)    Casoline   Appearance   Water clear fruj of impurities	Cresols	About 40 - 50 % )	in a "Kupferblase" according
Gasoline Appearance  Appearance  Specific weight at 15°C Boiling point Boiling point Boiling point Boiling point Conversion up to 100°C Vapor pressure according to Reid Summer  Water clear fruj of Impurities Below 0.800 Below 60°C Below 60°C  At least 20 % by volume At least 95 % by volume  At the most 0.6 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  Evaporation residue (Abdampfrest)  Sulphur content  At the most 20 mg./100 cm  Evaporation residue (Abdampfrest)  Neutralization number  Neutralization number  Neutralization number  Copper strip test  Negative	Xylenols		to the formation method
Appearance  Specific weight at 15°C Boiling point Boiling characteristics Conversion up to 100°C Conversion up to 200°C Vapor pressure according to Reid Summer  Water clear free of majorit impurities Below 0.800 Below 0.800 Below 60°C  Engler boiling analysis  At least 20 % by volume  At least 95 % by volume  Winter  At the most 0.6 atmospheres  up to 40°C  Evaporation residue (Abdampfrest)  Sulphur content  At the most 0.8 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  At the most 0.8 % Burning in an oxyhydrogen apparatus  Neutralization number  At the most 0.3 % Burning in an oxyhydrogen apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Negative  Fuel gas  Vapor pressure according to Reid Summer  At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at 40°C Botane ratus  Mater clear free of mapurities  Areometer  Engler boiling analysis  Engler boiling analysis  Engler boiling analysis  Engler boiling analysis  At least 0.8 atmospheres  Bomb apparatus  Evaporation residue from 100 cm of fuel at 110°C in a glass bowl (Glasschal- Burning in an oxyhydrogen apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  Octane rating  At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at -15°C  At least 1.5 atmospheres at -15°C  Apparatus		About 4 = 5 % )	(Verbandsmethode)
Appearance  Specific weight at 15°C Boiling point Boiling characteristics Conversion up to 100°C Conversion up to 200°C Vapor pressure according to Reid Summer  Water clear free of majorit impurities Below 0.800 Below 0.800 Below 60°C  Engler boiling analysis  At least 20 % by volume  At least 95 % by volume  Winter  At the most 0.6 atmospheres  up to 40°C  Evaporation residue (Abdampfrest)  Sulphur content  At the most 0.8 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  At the most 0.8 % Burning in an oxyhydrogen apparatus  Neutralization number  At the most 0.3 % Burning in an oxyhydrogen apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Negative  Fuel gas  Vapor pressure according to Reid Summer  At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at 40°C Botane ratus  Mater clear free of mapurities  Areometer  Engler boiling analysis  Engler boiling analysis  Engler boiling analysis  Engler boiling analysis  At least 0.8 atmospheres  Bomb apparatus  Evaporation residue from 100 cm of fuel at 110°C in a glass bowl (Glasschal- Burning in an oxyhydrogen apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  Octane rating  At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at -15°C  At least 1.5 atmospheres at -15°C  Apparatus	Gasolina		
Specific weight at 15°C Boiling point Boiling characteristics Conversion up to 100°C Vapor pressure according to Reid Summer Winter At the most 0.6 atmospheres up to 40°C  Evaporation residue (Abdampfrest)  Sulphur content  Neutralization number Neutralization number  Negative  Negative  Fuel gas Vapor pressure according to Reid Summer  At the most 0.3 mg. KOH/g.  At the most 0.3 mg. KOH/g.  Titration with n/10 alcohol- KOH solution Motor method  At least 0.7 atmospheres at 40°C  At most 16.7 atmospheres at 40°C  Below 60°C  At least 20 % by volume  At the most 0.6 atmospheres  Bomb apparatus  Evaporation residue from 100 cm² of fuel at 110°C in a glass bowl (Glasschal- Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Impurities  Below 60°C  At least 0.7 atmospheres at 40°C  Bomb Areometer  Below 60°C  At least 20 % by volume  At the most 0.6 atmospheres  Fuel gas  Vapor pressure according to Reid  At least 0.7 atmospheres at 40°C  At most 16.7 atmospheres at 40°C  Bomb At least 1.5 atmospheres at -15°C  Apparatus	Charles Company (Company)	Water clear fred of	
Specific weight at 15°C Boiling point Boiling characteristics Conversion up to 100°C Conversion up to 200°C  Vapor pressure according to Reid Summer  Minter  Evaporation residue (Abdampfrest)  Sulphur content  At the most 0.8 atmospheres  At the most 20 mg./100 cm  Evaporation residue (Abdampfrest)  Sulphur content  At the most 0.3 %  Burning in an oxytydrogen  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Fuel gas  Vapor pressure according to Reid Summer  At least 0.7 atmospheres at 40°C At least 1.5 atmospheres at -15°C At least 20 % by volume At the most 20 % by volume Bordand Atmospheres atmospheres atmosp			
Boiling point Boiling characteristics Conversion up to 100°C At least 20 % by volume Conversion up to 200°C Vapor pressure according to Reid Summer At the most 0.6 atmospheres Up to 40°C At the most 0.8 atmospheres Up to 40°C At the most 20 mg./100 cm  Evaporation residue (Abdampfrest) At the most 20 mg./100 cm (Abdampfrest)  Sulphur content At the most 0.3 % Burning in an oxyhydrogen apparatus or a Grete-Krekeler apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test Negative  Fuel gas Vapor pressure according to Reid Summer  At least 0.7 atmospheres at 40°C At least 1.5 atmospheres at -15°C Atmospheres atmospheres atmospheres atmospheres atmosphere	Specific weight at 15°C	Below 0.800	Areometer
Conversion up to 100°C At least 20 % by volume)  Conversion up to 200°C At least 95 % by volume)  Vapor pressure according to Reid  Summer At the most 0.6 atmospheres Bomb apparatus  up to 40°C At the most 0.8 atmospheres up to 40°C At the most 20 mg./100 cm  (Abdampfrest) Evaporation residue (Abdampfrest)  Sulphur content At the most 0.3 % Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  Neutralization number At the most 0.3 mg. KOH/g. Titration with n/10 alcohol-KOH solution  Copper strip test Negative Immersion of a copper strip in 50 cm. of gasoline for one hour at 50°C and 100°C  Octane rating 57 unleaded to 8 leaded  Fuel gas  Vapor pressure according to Reid Summer At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at 40°C Bomb At least 1.5 atmospheres at -15°C Bomb		Below 60°C	
Conversion up to 200°C  Vapor pressure according to Reid  Sugger  Winter  At the most 0.6 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  At the most 20 mg./100 cm  Evaporation residue (Abdampfrest)  At the most 20 mg./100 cm  (Abdampfrest)  At the most 20 mg./100 cm  Evaporation residue from 100 cm² of fuel at 110°C  in a glass bowl (Glasschal- Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  Neutralization number  At the most 0.3 % Burning in an oxyhydrogen apparatus  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Octane rating  Fuel gas  Vapor pressure according to Reid Sugger  At least 0.7 atmospheres at 40°C  At most 16.7 atmospheres at 40°C  Bomb Winter  At least 1.5 atmospheres at -15°C  apparatus	Boiling characteristics	)	Engler boiling analysis
Vapor pressure according to Reid  Summer  At the most 0.6 atmospheres)  Winter  At the most 0.8 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  Evaporation residue (Abdampfrest)  At the most 20 mg./100 cm  (Abdampfrest)  Sulphur content  At the most 0.3 %  Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Octane rating  Fuel gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 40°C  At most 16.7 atmospheres at 40°C  At least 1.5 atmospheres at -15°C  Apparatus	Conversion up to 100°C	At least 20 % by volume)	
At the most 0.6 atmospheres   Bomb apparatus   up to 40°C    Winter		At least 95 % by volume)	
Winter  Winter  Winter  At the most 0.6 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  At the most 0.8 atmospheres  up to 40°C  At the most 20 mg./100 cm  100 cm  100 cm  of fuel at 110°C  in a glass bowl (Glasschal-  Burning in an oxyhydrogen  apparatus or a Grote-Krekeler  apparatus  Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol-  KOH solution  Copper strip test  Negative  Immersion of a copper strip  in 50 ccm. of gasoline for  one hour at 50°C and 100°C  Octane rating  Fuel gas  Vapor pressure according  to Reid  Summer  At least 0.7 atmospheres at 0°C  At most 16.7 atmospheres at 40°C  Bomb  Winter  At least 1.5 atmospheres at -15°C  apparatus			1
Winter  At the most 0.8 atmospheres) up to 40°C At the most 20 mg./100 cm (Abdampfrest)  Sulphur content  At the most 0.3 %  Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Octane rating  Fuel gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 40°C At most 16.7 atmospheres at 40°C At least 1.5 atmospheres at 40°C At least 1.5 atmospheres at 40°C At least 1.5 atmospheres at 40°C At paparatus			es) Bomb apparatus
Evaporation residue (Abdampfrest)  At the most 20 mg./100 cm 100 cm of fuel at 110 cm a glass bowl (Glasschaller and a glasschaller and a glas	lift mit are		
Evaporation residue (Abdampfrest)  At the most 20 mg./100 cm    100 cm of fuel at 110 C    in a glass bowl (Glasschal- Burning in an oxyhydrogen    apparatus or a Grote-Krekeler    apparatus  Neutralization number    At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test    Negative    Sequence of gasoline for    one hour at 50°C and 100°C  Octane rating    Fuel gas  Vapor pressure according to Reid    Summer    At least 0.7 atmospheres at 40°C    At most 16.7 atmospheres at 40°C    Bomb    Winter    At least 1.5 atmospheres at -15°C    apparatus	WILLGER	4 - 1000	•
Sulphur content  At the most 0.3 %  Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Octane rating  Fuel gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 0°C  At most 16.7 atmospheres at 40°C  Bomb  Winter  At least 1.5 atmospheres at -15°C  apparatus		At the most 20 mg./100 cm	Evaporation residue from
Sulphur content  At the most 0.3 %  Burning in an oxyhydrogen apparatus or a Grote-Krekeler apparatus  Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol-KOH solution  Copper strip test  Negative  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Octane rating  Fuel gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 0°C  At most 16.7 atmospheres at 40°C  Bomb  Winter  At least 1.5 atmospheres at -15°C  apparatus	(Modembries)		
Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  Eleast  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 0°C  At most 16.7 atmospheres at 40°C  Bomb  Winter  At least 1.5 atmospheres at -15°C  apparatus	Sulphur content	At the most 0.3 %	Burning in an oxyhydrogen
Neutralization number  At the most 0.3 mg. KOH/g. Titration with n/10 alcohol- KOH solution  Copper strip test  Negative  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  Example 1 ccm.  Fuel gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 0°C  At most 16.7 atmospheres at 40°C  Winter  At least 1.5 atmospheres at -15°C  At paparatus			
Copper strip test  Negative  Immersion of a copper strip in 50 ccm. of gasoline for one hour at 50°C and 100°C  Motor method  Eucl gas  Vapor pressure according to Reid  Summer  At least 0.7 atmospheres at 0°C  At most 16.7 atmospheres at 40°C  Winter  Motor method  Bomb  At least 1.5 atmospheres at -15°C  Apparatus	Neutralization number	At the most 0.3 mg. KOH/g	. Titration with n/10 alcohol-
In 50 ccm. of gasoline for one hour at 50°C and 100°C  Octane rating 57 unleaded Motor method  Example 100°C Motor method  Octane rating 57 unleaded Motor method  Octane rating 50°C and 100°C  Motor method  Octane rating 57 unleaded Motor method		** · · · · · · · · · · · · · · · · · ·	
Octane rating 57 unleaded Motor method 68 leaded  Fuel gas  Vapor pressure according to Reid  Summer At least 0.7 atmospheres at 0°C )  At most 16.7 atmospheres at 40°C ) Bomb  Winter At least 1.5 atmospheres at -15°C ) apparatus	Copper strip test	vegariae	in 50 ccm. of gasoline for
Vapor pressure according to Reid Summer At least 0.7 atmospheres at 0°C ) At most 16.7 atmospheres at 40°C ) Bomb Winter At least 1.5 atmospheres at -15°C ) apparatus	1 (3mh ann a + 4	POT and Domest - 4	
Vapor pressure according to Reid Summer At least 0.7 atmospheres at 0°C At most 16.7 atmospheres at 40°C Bomb Winter At least 1.5 atmospheres at -15°C apparatus	Octane rating		Motor method
Vapor pressure according to Reid Summer At least 0.7 atmospheres at 0°C ) At most 16.7 atmospheres at 40°C ) Bomb Winter At least 1.5 atmospheres at -15°C ) apparatus	Fuel gas	LC TESTER	
to Reid Summer At least 0.7 atmospheres at 0°C ) At most 16.7 atmospheres at 40°C ) Winter At least 1.5 atmospheres at -15°C ) apparatus	Vapor pressure according		
Winter At least 1.5 atmospheres at -15°C ) apparatus			
Winter At least 1.5 atmospheres at -15°C ) apparatus	Summer	At least 0.7 atmospheres	at O'C )
Winter At least 1.5 atmospheres at -15°C ) apparatus		At most 16.7 atmospheres	at 40°C ) Bomb
At most 16.7 atmospheres at 40°C )	Winter	At least 1.5 atmospheres	at -15°C ) apparatus
		At most 16.7 atmospheres	at 40°C )

25X1A

-4-

		20/(1/(
Characteristics	Guaranteed Value	Testing Method
Composition		
Summer	At most 75 % butane by weight	t
	At most 3 % inert gasses by weight Remainder propane and ethane	Analysis according to Stock, fractionated
Winter	At most 65 % butane by weigh At most 3 % inert gasses by weight	Aschm
·	Remainder propane and ethane	
Sulphur content	Not over 0.2 \$	Burning in an oxyhydrogen apparatus
Sulphur in organic compounds	Not over 250 mg./m <sup>3</sup> of gas	Burning in an oxyhydrogen apparatus
Hydrogen sulphide conte Carbon oxysulphide cont	nt Not over 0.2 mg./m <sup>3</sup> of gas ent Negative A	Cadmium acetate method lcohol"Natriumbit" solution
Doctor test (mercaptan)	Negative	Water-"Natriumbit" solution and flowers of
Resin and resin formati	on Negative	sulphur (Schwefelbluele) Evaporation residue from liquid gas after treatment with Fuller's earth
Oil traces	Not over 10 mg./10 1.	Evaporation residue from liquid gas after separation of resin and resin formations
Water content	Under pressure no ice and/ or hydrocarbon precipitate should be formed above -30°C	Separation by freezing (Ausfrieren) in a Dewa jar according to DIN 1875

25X1A 1/ Comment. E stands for Erstarrungspunkt(solidifying point).